LDMS Barcoding Documentation for the HPTN and MTN Networks

Includes:

- Procedure for Entering HPTN Samples in Specimen Management
- Procedure for Adding Specimens to Storage Using the LDMS Barcode
- Procedure for Selecting the HPTN or MTN Barcode Format
- LDMS Barcode Memo
- Contact and Technical Support Information
- Procedure for Installing the Windows Driver for your Brady MVP 300 Label Printer
- Procedure for Configuring the Brady MVP 300 Label Printer for the LDMS

Entering HPTN Samples in Specimen Management

The Specimen Management module is used to enter patient, primary and aliquot information.

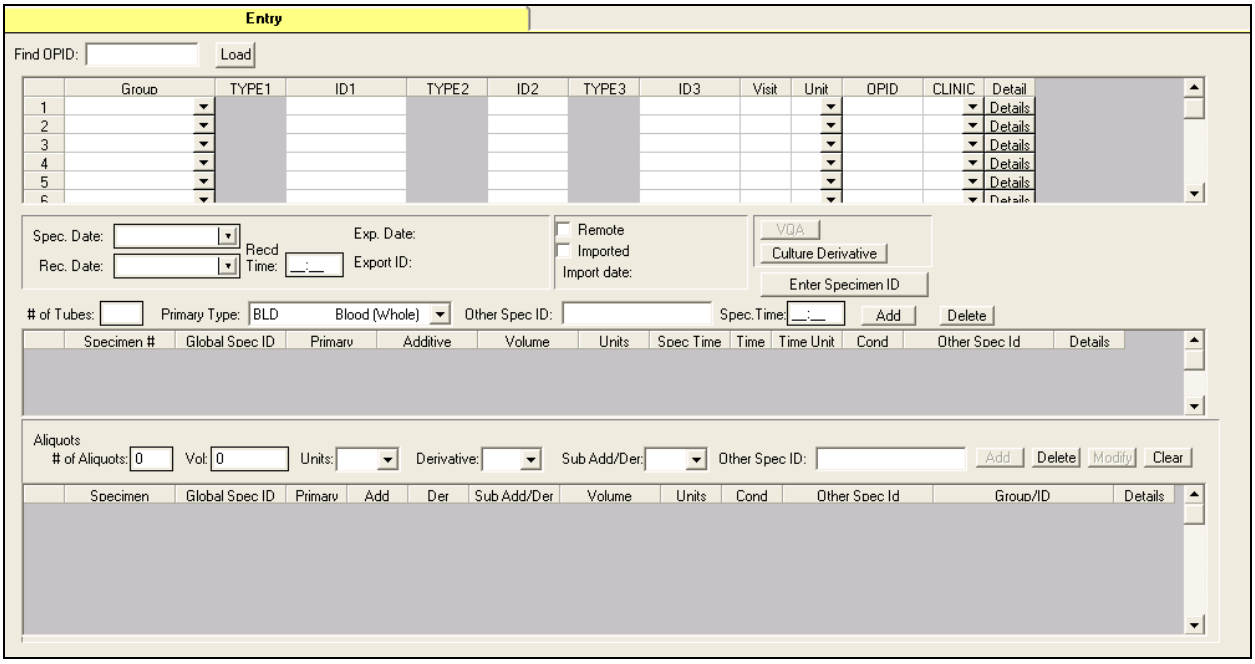

Figure 1. Specimen Management Module

Entering Patient Information

1. Go to **Tasks – Specimen Management** on the LDMS menu bar or click the **Specimen Management** ( ) button on the LDMS toolbar.
2. Select **HPTN** from the **Group** box.
3. Enter the PID in the **ID1** field.
4. Enter the Protocol number in the **ID2** field.
5. Enter the **Visit** and **Visit Unit** in the appropriate fields.

Entering Primary Information

1. Select the specimen date from the **Spec. Date** box.

   Note: The Spec. Date field should reflect the day the specimen was drawn.

2. Select the received date from the **Rec. Date** box.

   Note: The Rec. Date field should reflect the day the specimen was received in the lab.

3. Enter the number of primary tubes in the **# of Tubes** field.
4. Click the **Add** button above the Primary grid.
5. Modify the primary type, if needed, by selecting the primary from the **Primary** box.
6. Select an additive from the **Additive** box.
7. Enter the volume of the primary in the **Volume** field, and select a volume unit from the **Unit** box.
8. If required by the protocol, enter a **Spec. Time**, **Time** and **Time Unit** in the fields.

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Entering Aliquot Information

1. In the Primary grid, click on the primary specimen that you wish to create aliquots from.
2. Enter the number of aliquots in the **# of Aliquots** field.
3. Enter the volume of the aliquot in the **Volume** field, and select a volume unit from the **Unit** box. If the aliquots will have different volume values, enter each aliquot separately.
4. Select a derivative from the **Derivative** box.
5. Select an additional additive or derivative from the **Sub Add/Der** box, if applicable.
6. Click the **Add** button above the Aliquot grid.

Saving Specimen Information

1. Click the **Add** ( ) button on the LDMS toolbar to add the new specimen information to your lab's LDMS database. If the patient is not enrolled in your lab's database, the Enroll Patient dialog box will appear.
2. Click **Enroll** to add the patient information to your database. The Saving dialog box appears.
3. Click **OK**. A label dialog box will appear asking if you would like to generate labels.
4. To display labels for the aliquots you just added, select the label size from the box and click **Yes**.

> **Note:** Labels can also be generated in the Labels module. Refer to the Labels chapter of the LDMS User Manual for more information.

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Adding Specimens to Storage Using the LDMS Barcode

Specimens may be added to storage by scanning the LDMS aliquot barcode and selecting a position in the storage structure.

To add specimens using the LDMS barcode:

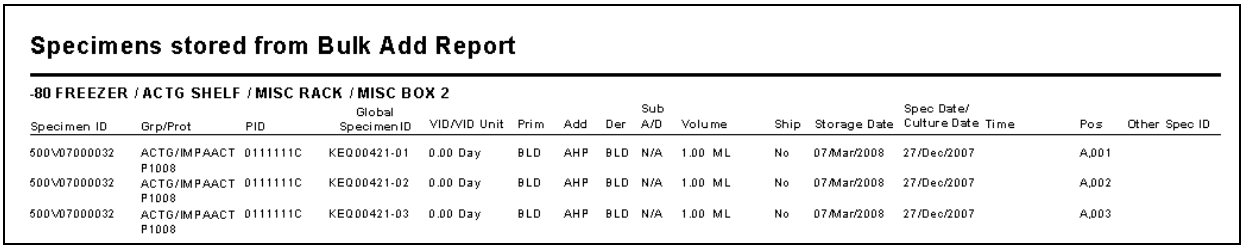
1. Go to **Tasks – Storage Management** on the LDMS menu bar, or click the **Storage Management** ( ) button on the LDMS toolbar.
2. Click the **Bulk Add** tab.
3. In the **Storage Structure** box, open the hierarchy to display the container in which the specimens will be stored.
4. Click on the container to select it.
5. Scan the aliquot barcode. The specimen position dialog box appears.

   To position the specimen(s) in a container:

   - Click on a position in the grid and click **Put Here**;
   - Click **Automatic** to let the LDMS select the position of the specimens in the container based on the container's fill order. To start the Auto fill from a particular location, select the location on the grid, verify that the **Start Here** check box is selected, and then click **Automatic**; or
   - Click the **Auto All** button to automatically select the positions of all the selected specimens based on the container's fill order. To start the Auto fill from a particular location, select the location on the grid, verify that the **Start Here** check box is selected, and then click **Auto All**.

     *Note: Clicking the Auto All button activates the **Automatically Assign Positions** check box on the Options dialog box. Refer to Using the Options Button section of this chapter for additional information. This feature will remain active until turned off through the Options button or until the Storage Module is closed. While the Automatically Assign Positions feature is activated, the Position Selection dialog box will not appear for subsequent Storage Structure additions.*

6. Repeat steps 2 – 5 for each aliquot to be stored.
7. Click **View Results** at the bottom of the Bulk Add screen. A Storage dialog box appears displaying specimen storage locations.
8. Click **Report**. The Specimens Stored from Bulk Add Report will be displayed. (See **Figure 1**.)
9. Click the **Print** ( ) button on the Crystal Reports window toolbar to print the Bulk Add Results report.



Specimens stored from Bulk Add Report

-80 FREEZER / ACTG SHELF / MISC RACK / MISC BOX 2

Specimen ID	Grp/Prot	PID	Global SpecimenID	VID/VID Unit	Prim	Add	Der	Sub A/D	Volume	Ship	Storage Date	Spec Date/ Culture Date Time	Pos	Other Spec ID
500\V07000032	ACTG/IMPAACT P1008	0111111C	KEQ00421-01	0.00 Day	BLD	AHP	BLD	N/A	1.00 ML	No	07/Mar/2008	27/Dec/2007	A,001	
500\V07000032	ACTG/IMPAACT P1008	0111111C	KEQ00421-02	0.00 Day	BLD	AHP	BLD	N/A	1.00 ML	No	07/Mar/2008	27/Dec/2007	A,002	
500\V07000032	ACTG/IMPAACT P1008	0111111C	KEQ00421-03	0.00 Day	BLD	AHP	BLD	N/A	1.00 ML	No	07/Mar/2008	27/Dec/2007	A,003	

Figure 1. Specimens Stored from Bulk Add Report

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Selecting the HPTN or MTN Barcode Format

1. Go to **Tasks – Labels** on the LDMS menu bar or click the Labels ( ) button located on the LDMS toolbar. The Labels Module opens. (See **Figure 1**.)

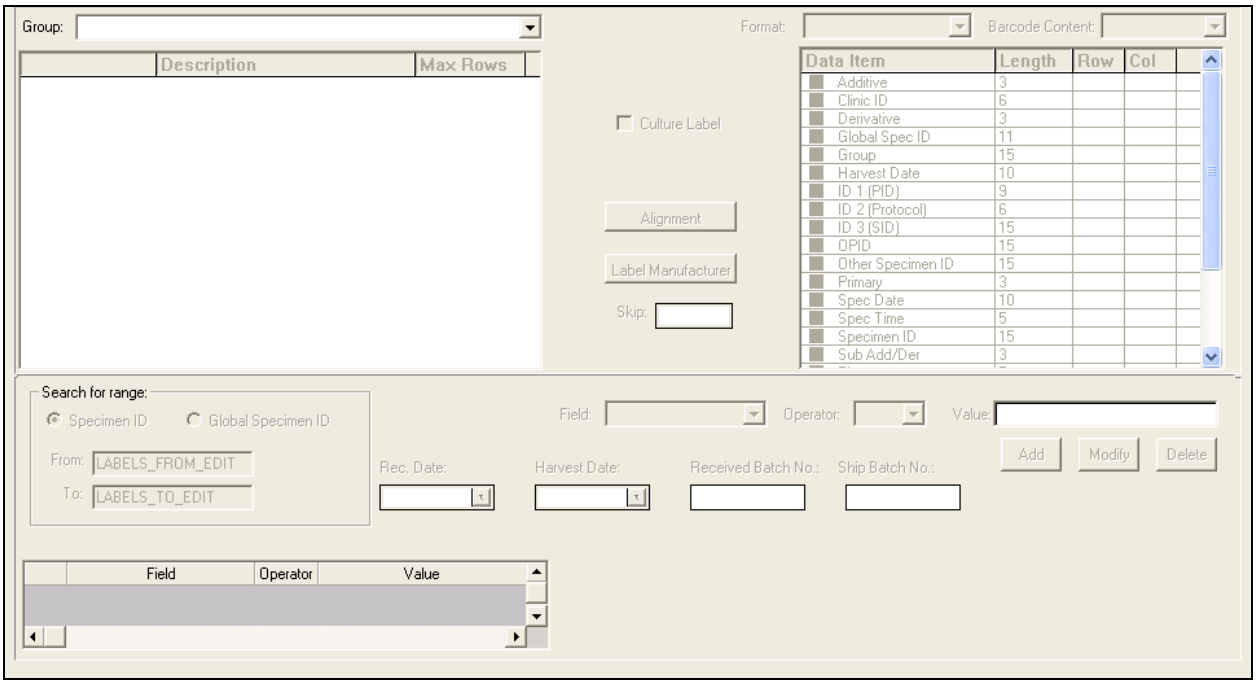

Figure 2. Labels Module

2. Select either the **HPTN** or **MTN** from the **Group** box, depending on your protocol.
3. Select either **HPTN barcode** or **MTN barcode** from the **Format** box. The **Barcode Content** box displays **LDMS Standard** and appears grayed.
4. Select the correct Barcode label option for the MVP printer from the grid on the left of the screen.

Note: If you are choosing not to use the barcode on the labels, which is not mandatory for existing protocols, you would choose HPTN non-barcode or MTN non-barcode. If you are generating the label from the specimen management screen, choose either the barcode or non-barcode option.

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Implementation of LDMS Barcode at HPTN/MTN Network Laboratories

HPTN/MTN Network Laboratory sites are now ready to start specimen barcoding for current and future protocols.

An example of the two-dimensional LDMS-generated barcode label is below:

Row 1: LDMS Specimen ID
Row 2: Global Specimen ID
Row 3: Patient Identifier (ID1) and Study/Protocol Identifier (ID2)
Row 4: Specimen Date or Harvest Date and Specimen Collection Time
Row 5: Primary Type, Additive Type, Derivative Type, and Sub Additive/Derivative Type
Row 6: Volume/Volume Unit and Visit/Visit Unit (VID)

- After LDMS barcode labels are printed, they must be visually inspected to ensure that the barcode is not cut-off on any side, that all printed items are readable and intact, that no lines or crimps affect the barcode or printed items and that the barcode is not covered by a label tail, either by using a label size with a short tail or by applying the label to the tube tail-first. If the label does not pass inspection, it must be discarded and reprinted, which may involve making printer alignment or configuration adjustments.

- Labels should then be scanned to check the quality of the barcode. This can be done by either scanning the specimens to assign storage locations in the LDMS Storage Management module or by scanning into any text editor program such as Word or Notepad. The scanability must be verified for all barcode labeled specimens prior to shipment. Labels that are unable to be scanned must be discarded and reprinted, which may involve making printer alignment or configuration adjustments.

- During initial implementation, each technician should scan 100% of all labels generated (approximately one box or more as needed) to ensure that they are comfortable with the scanning technique.

- Laboratories should print a set of test labels after printer alignment or calibration, or after changing printer components, such as label stock or ribbons, to verify the scan prior to generating labels for specimen tubes.

The pilot laboratories acknowledged that there is a technique to successfully scan a barcode labeled tube, including the angle of the scanner and the distance between the scanner and the tube. Initially a technician may have a harder time getting the reader to scan successfully until they have mastered the technique.

Below is the suggested procedure for scanning LDMS specimen barcodes:

- Hold the top of the tube with the thumb and index finger, placing the remaining fingers directly behind the tube to darken the background and provide a contrast while scanning.
- For tubes that do not scan immediately using the technique described above, release the trigger on the scanner and depress it a second time (i.e., a double trigger) or pull the scanner away from the barcode on the tube and then bring it close while keeping the laser on the barcode.
- For tubes that may have minor smudges or accumulated ice covering the barcode, wipe the tube with gauze immersed in 70% alcohol prior to scanning.

  Note: Sloppy label placement, longer tailed labels, overlap of the label over the barcode and barcodes that were cut-off due to printer alignment issues all contributed to decreased scanability of the barcodes. Based on these findings, the longer tailed labels were removed from the list of recommended label stock.

For Assistance

Each of the HPTN sites has been asked to contact Brady directly regarding installation. Brady Corp, the supplier of the LDMS scanners and printers has offered a service to assist in the installation of your new equipment. It's called the Stress Free Assistance Program. Julie Schoenborn, of Brady America can be reached at the contact information below to coordinate installation via phone.

Julie Schoenborn
Sr. Strategic Account Manager
Laboratory Products Group
Brady Americas
www.bradyid.com/lab
Voice: (800) 541-1686, ext. 817296
Direct : (512) 759-2452
Fax: (512) 759-2453
Email: julie_schoenborn@bradycorp.com

Shortcut Setup

Printer Setup

1. Install the labels and ribbon.
2. Setup the sensor to the correct position based on the labels installed.
3. Allow the machine to calibrate.

The following link is a video that provides step-by-step instructions on how to install the materials:

http://www.bradyid.com/bradyid/downloads/downloadsDetailView.do/~0/~0/~0/US_WIDEN_MVP_Calibration.128k.rmvb/~0/~0/~0/~0/~0.html

Procedure for Installing the Windows Driver for the Brady MVP 300 Label Printer for use with the LDMS

The following instructions can also be used for installing the driver under Windows 2000 as most of the screens will be very similar.

If you have any questions, contact LDMS User Support at dmc.ldms.usersupport@fstrf.org or via phone at (716) 834-0900 x7311.

Note: Before attempting to install the driver, make sure that you are logged into your computer as the Administrator.

1. Download the driver from Brady's driver download website at http://www.bradyid.com/web/SiteBuilder/BradyIISBv1r0.nsf/FLV/DriversUpdates. Download the appropriate driver labeled either "MVP300 for Windows XP" or "MVP300 Plus for Windows XP."

   *Note: The driver file will be zipped. Before proceeding to the next step, unzip the file by right-clicking on the file and selecting **Extract All** from the menu. Make note of where you unzip the files because you will need to locate them later during the installation.*

2. Go to **Start** > **Settings** > **Printers and Faxes**. Depending on how your start menu is set up, Printers and Faxes may be located on your Start menu. The Printers and Faxes window displays. (See **Figure 1**.)

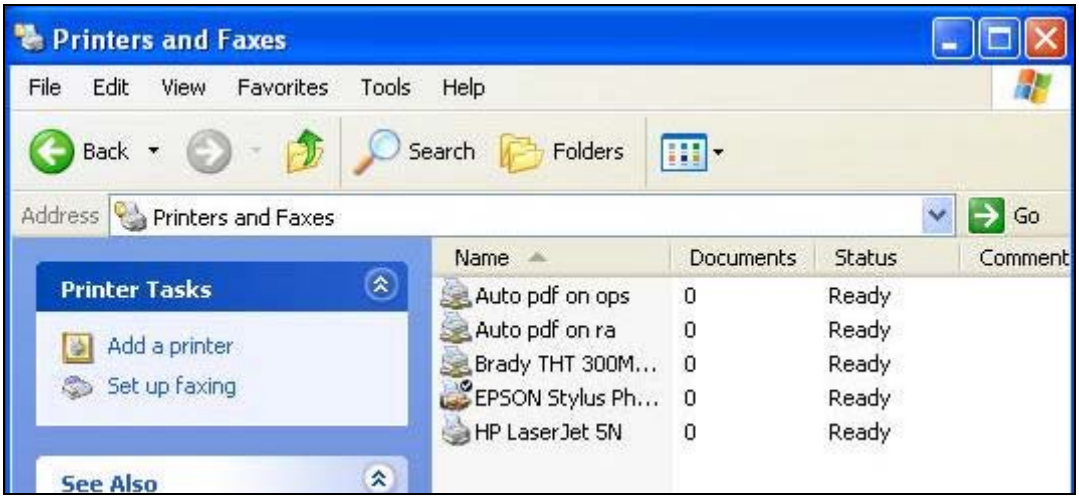

Figure 3. Printers and Faxes Window

3. Click **Add a printer** under Printer Tasks. The Add Printer Wizard appears. (See **Figure 2**.)
4. Click **Next**.

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Welcome to the Add Printer Wizard
This wizard helps you install a printer or make printer connections.
If you have a Plug and Play printer that connects through a USB port (or any other hot pluggable port, such as IEEE 1394, infrared, and so on), you do not need to use this wizard. Click Cancel to close the wizard, and then plug the printer's cable into your computer or point the printer toward your computer's infrared port, and turn the printer on. Windows will automatically install the printer for you.
To continue, click Next.
< Back
Next >
Cancel

Figure 4. Add Printer Wizard

5. Click **Local printer attached to this computer** and clear the Automatically detect and install my Plug and Play printer check box.
6. Click **Next**.

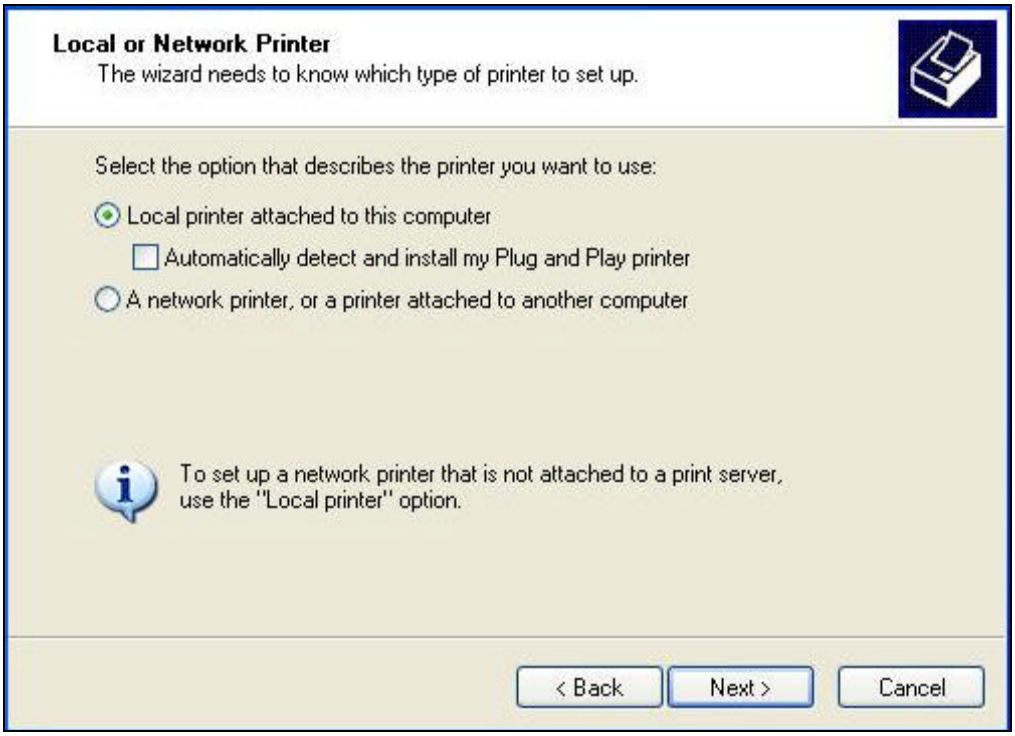
Local or Network Printer
The wizard needs to know which type of printer to set up.
Select the option that describes the printer you want to use:
Local printer attached to this computer
Automatically detect and install my Plug and Play printer
A network printer, or a printer attached to another computer
To set up a network printer that is not attached to a print server, use the "Local printer" option.
< Back
Next >
Cancel

Figure 5. Local or Network Printer Screen

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7. Verify that **LPT1: (Recommended Printer Port)** is selected from the **Use the following port** menu.
8. Click **Next**.

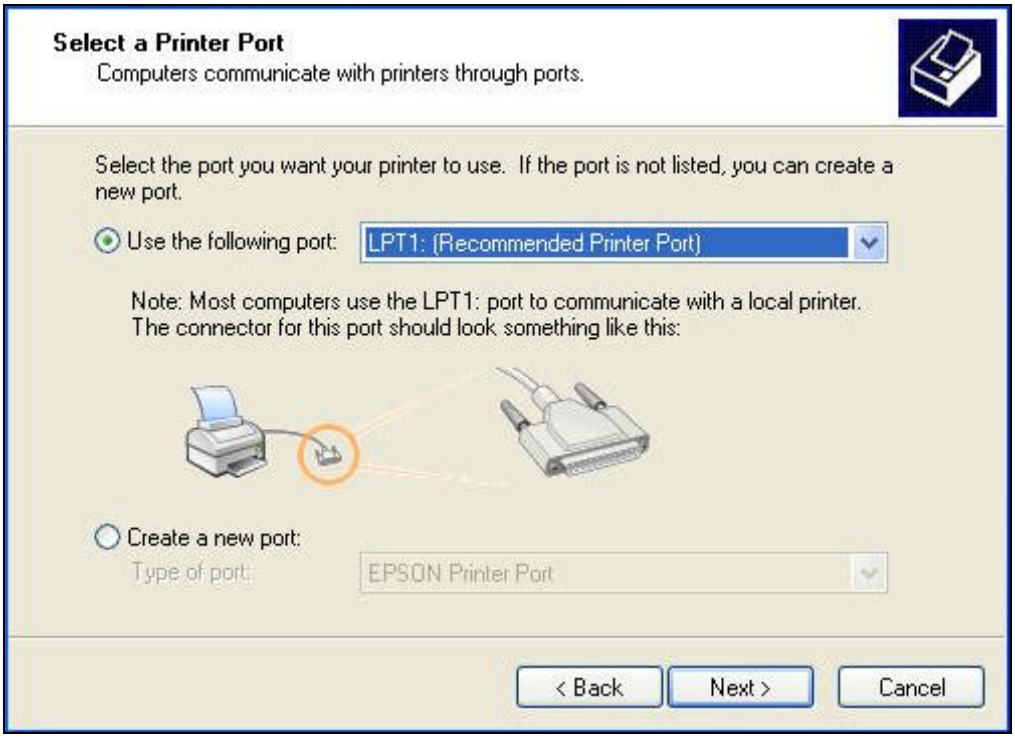
Select a Printer Port
Computers communicate with printers through ports.
Select the port you want your printer to use. If the port is not listed, you can create a new port.
Use the following port:
LPT1: (Recommended Printer Port)
Note: Most computers use the LPT1: port to communicate with a local printer. The connector for this port should look something like this:
Create a new port:
Type of port:
EPSON Printer Port
< Back
Next >
Cancel

Figure 6. Select a Printer Port Screen

9. Click **Have Disk…**. The Install From Disk window opens. (See **Figure 6**.)

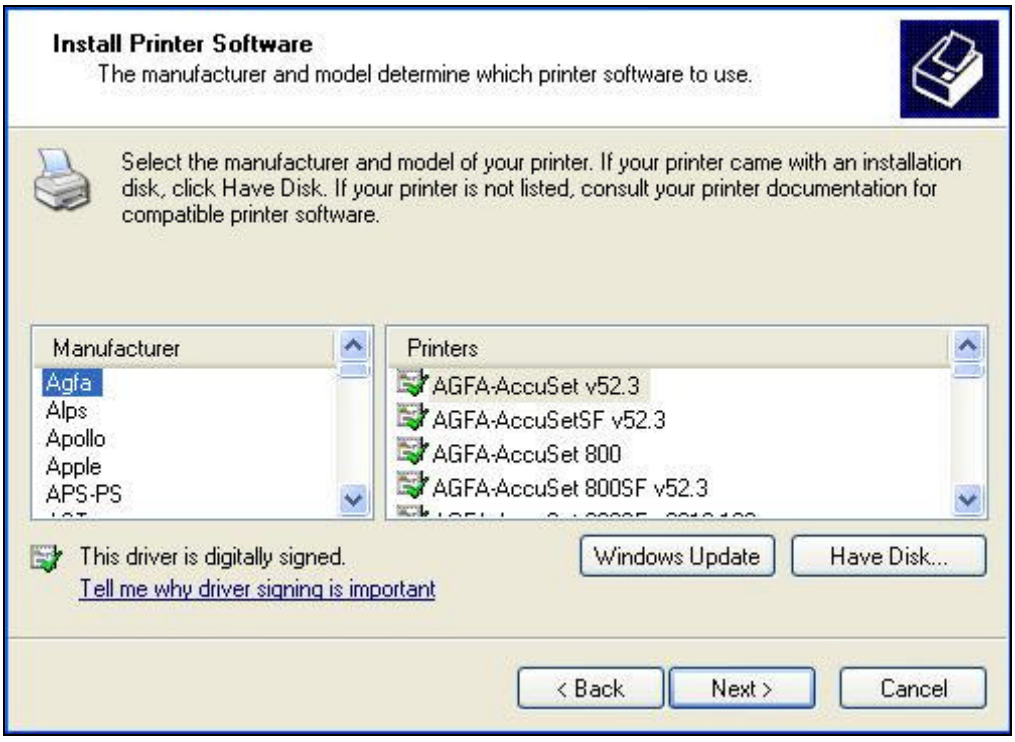
Install Printer Software
The manufacturer and model determine which printer software to use.
Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for compatible printer software.
Manufacturer
Agfa
Alps
Apollo
Apple
APS-PS
Printers
AGFA-AccuSet v52.3
AGFA-AccuSetSF v52.3
AGFA-AccuSet 800
AGFA-AccuSet 800SF v52.3
This driver is digitally signed.
Tell me why driver signing is important
Windows Update
Have Disk...
< Back
Next >
Cancel

Figure 7. Install Printer Software Screen

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10. Click **Browse…**. The Locate File window opens. (See **Figure 7**.)

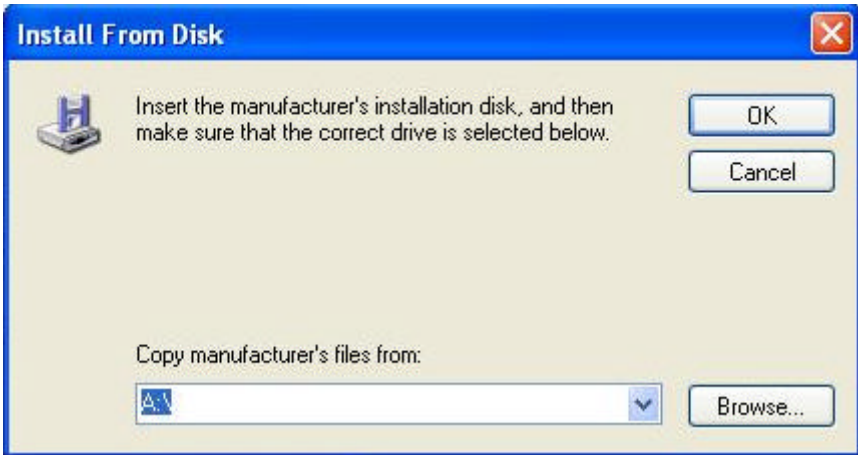

Figure 8. Install from Disk Window

11. Select the drive that you saved the Brady driver to and then locate the appropriate folder. OEMSETUP.INF should display in the **File name** box.
12. Click **Open**.

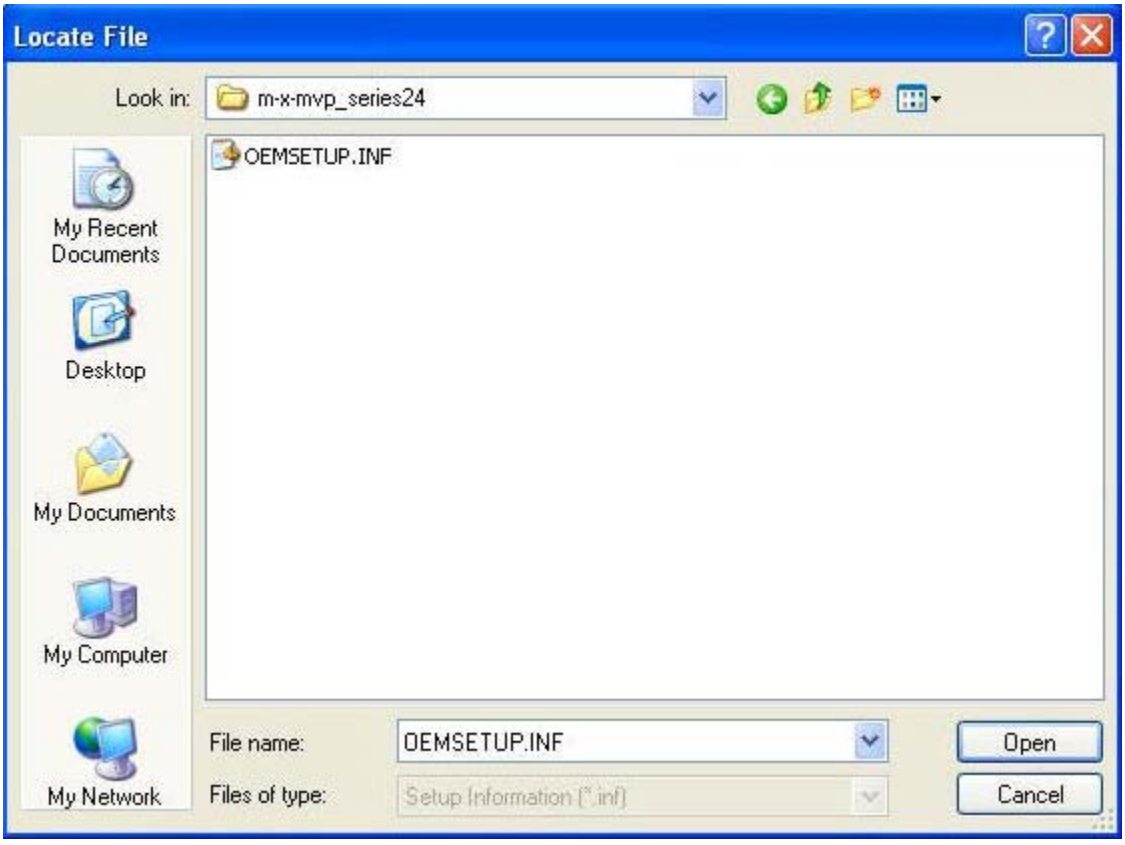

Figure 9. Locate File Window

13. Click **OK** on the Install From Disk window. (See **Figure 8**.)

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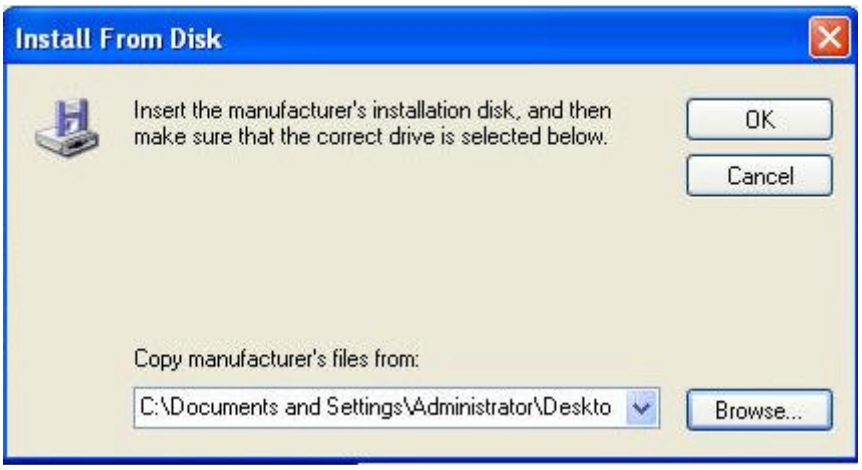
Install From Disk
Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.
OK
Cancel
Copy manufacturer's files from:
C:\Documents and Settings\Administrator\Deskto
Browse...

Figure 10. Install from Disk Window

14. Select **Brady THT 300MVP** from the **Printers** list and click **Next**. If you have the MVP300 Plus, select that option from the list.

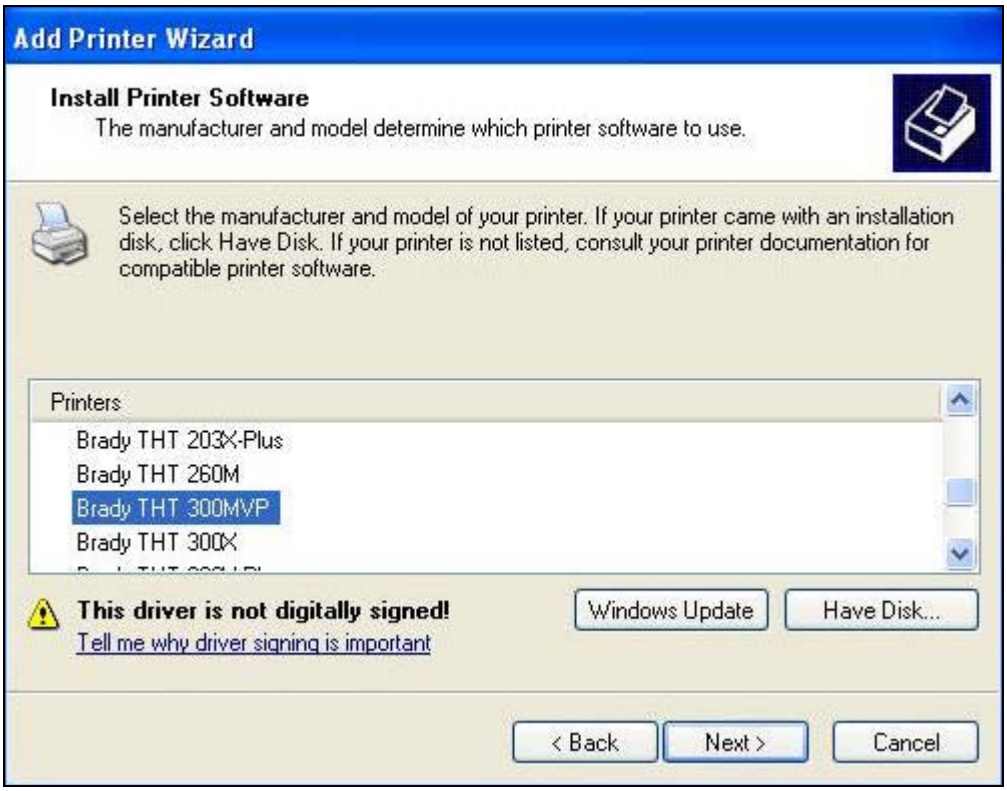
Add Printer Wizard
Install Printer Software
The manufacturer and model determine which printer software to use.
Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for compatible printer software.
Printers
Brady THT 203X-Plus
Brady THT 260M
Brady THT 300MVP
Brady THT 300X
This driver is not digitally signed!
Tell me why driver signing is important
Windows Update
Have Disk...
< Back
Next >
Cancel

Figure 11. Install Printer Software Screen

15. Type the name of your printer in the **Printer name** box. Depending on your printer, the default name is either **Brady THT 300MVP** or **Brady THT 300MVP Plus**.

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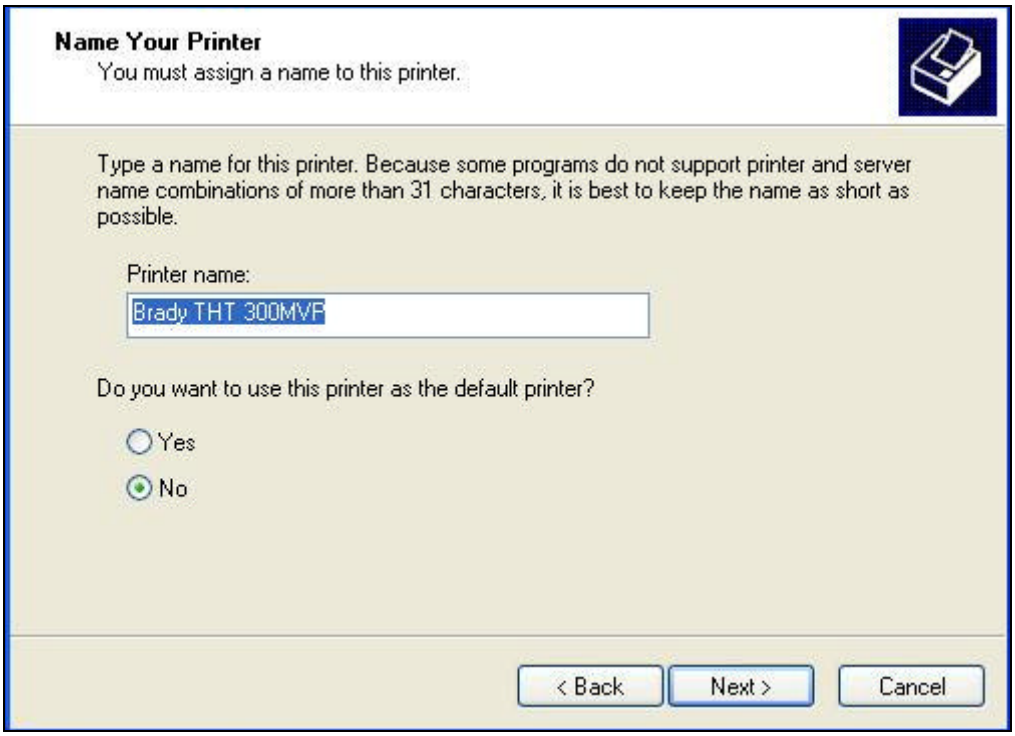
Name Your Printer
You must assign a name to this printer.
Type a name for this printer. Because some programs do not support printer and server name combinations of more than 31 characters, it is best to keep the name as short as possible.
Printer name:
Brady THT 300MVP
Do you want to use this printer as the default printer?
Yes
No
< Back
Next >
Cancel

Figure 12. Name Your Printer Screen

16. The Printer Sharing screen allows you to share your printer over a network with other machines. Select **Do not share this printer**.
17. Click **Next**.

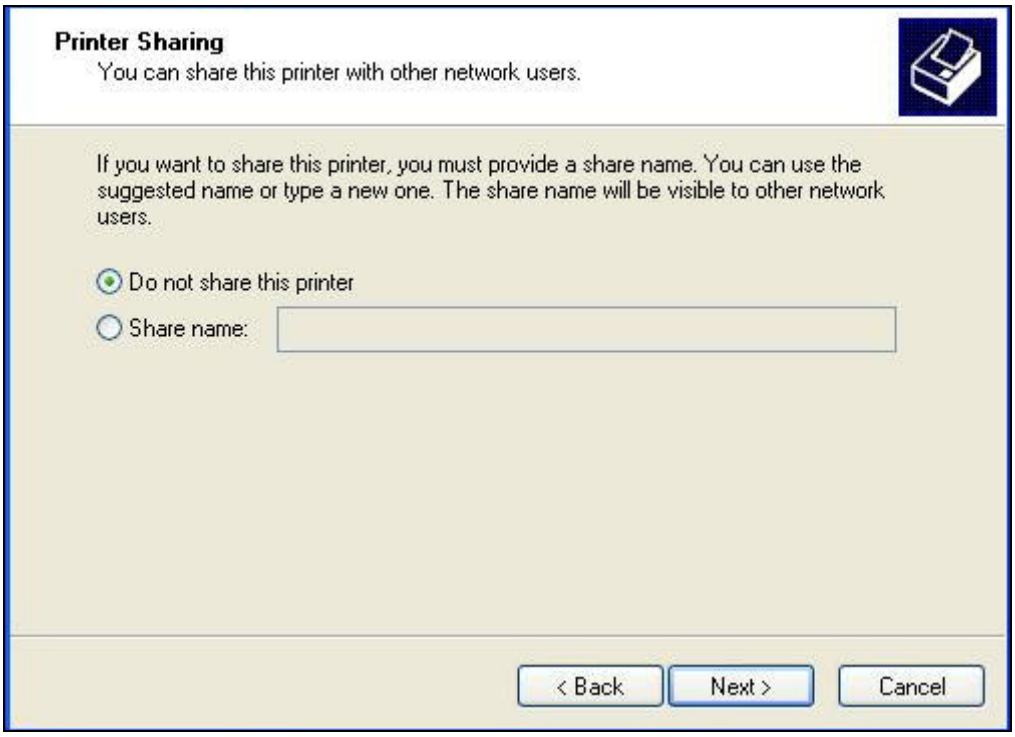
Printer Sharing
You can share this printer with other network users.
If you want to share this printer, you must provide a share name. You can use the suggested name or type a new one. The share name will be visible to other network users.
Do not share this printer
Share name:
< Back
Next >
Cancel

Figure 13. Printer Sharing Screen

18. Select **No** on the Print Test Page screen. A Windows test page is designed to print on 8 ½ by 11 inch paper that will not print correctly on a small label.
19. Click **Next**.

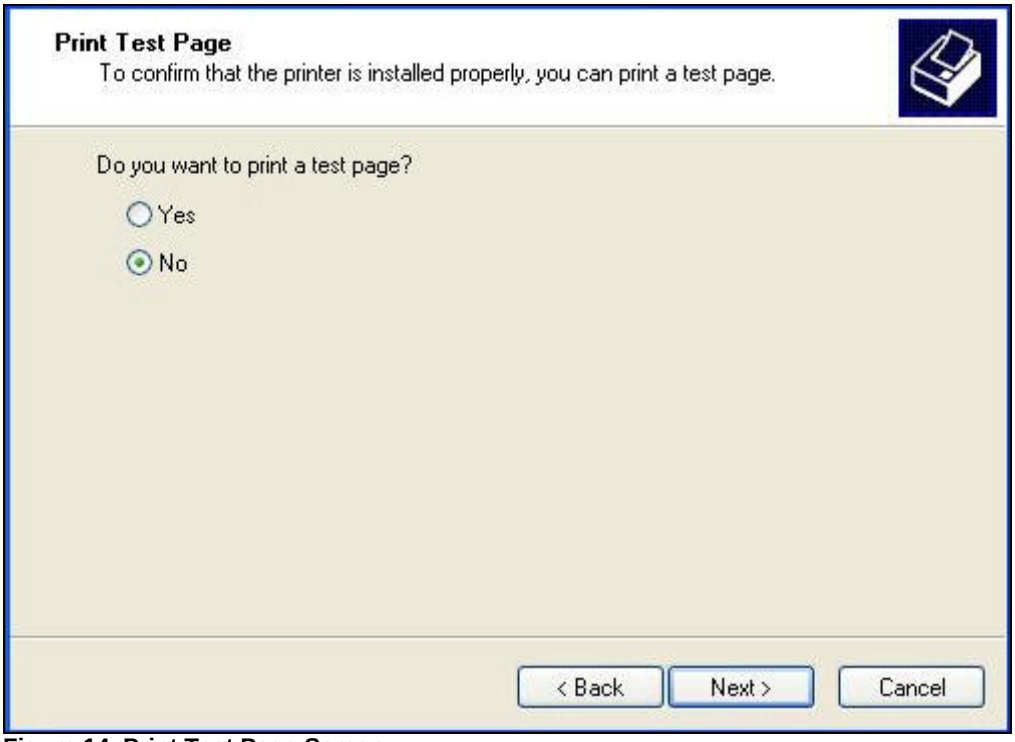
Print Test Page
To confirm that the printer is installed properly, you can print a test page.
Do you want to print a test page?
Yes
No
< Back
Next >
Cancel

Figure 14. Print Test Page Screen

20. The Hardware Installation window indicates that the Brady driver has not gone through Microsoft compatibility testing. For more information on Microsoft compatibility testing, click on the **Tell me why this testing is important** link.
21. Click **Continue Anyway**. The driver files are copied and installed.

Hardware Installation
The software you are installing for this hardware:
Printers
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Figure 15. Hardware Installation Screen

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22. Click **Finish**. The **Brady THT 300MVP** or **Brady THT 300MVP Plus** is now installed on your computer.

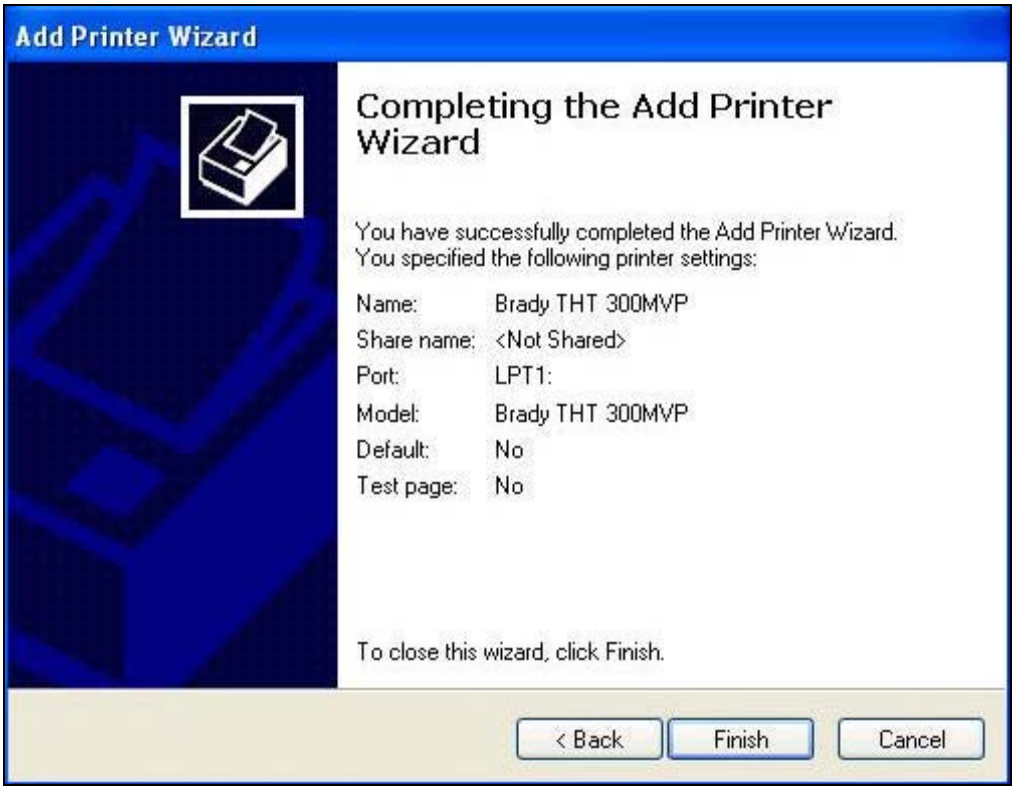

Figure 16. Add Printer Wizard

Procedure for Configuring the Brady MVP 300 Label Printer for the LDMS

If you have any questions, contact LDMS User Support at ldmshelp@fstrf.org or via phone at (716) 834-0900 x7311.

Note: Before following the procedure below, verify that the Brady MVP 300 printer is installed on your computer. In addition, you will need to purchase a null-modem cable in order to connect the printer to the computer. This cable can be purchased either through Brady or at your local computer store.

1. Go to **Start** > **Settings** > **Printers and Faxes**.
2. Right click on the **Bradyprinter THT 300MVP print driver** and select **Properties** from the shortcut menu. The Brady THT 300 MVP Properties dialog box displays. (See **Figure 1**.)
3. Click **Printing Preferences** on the General Tab.

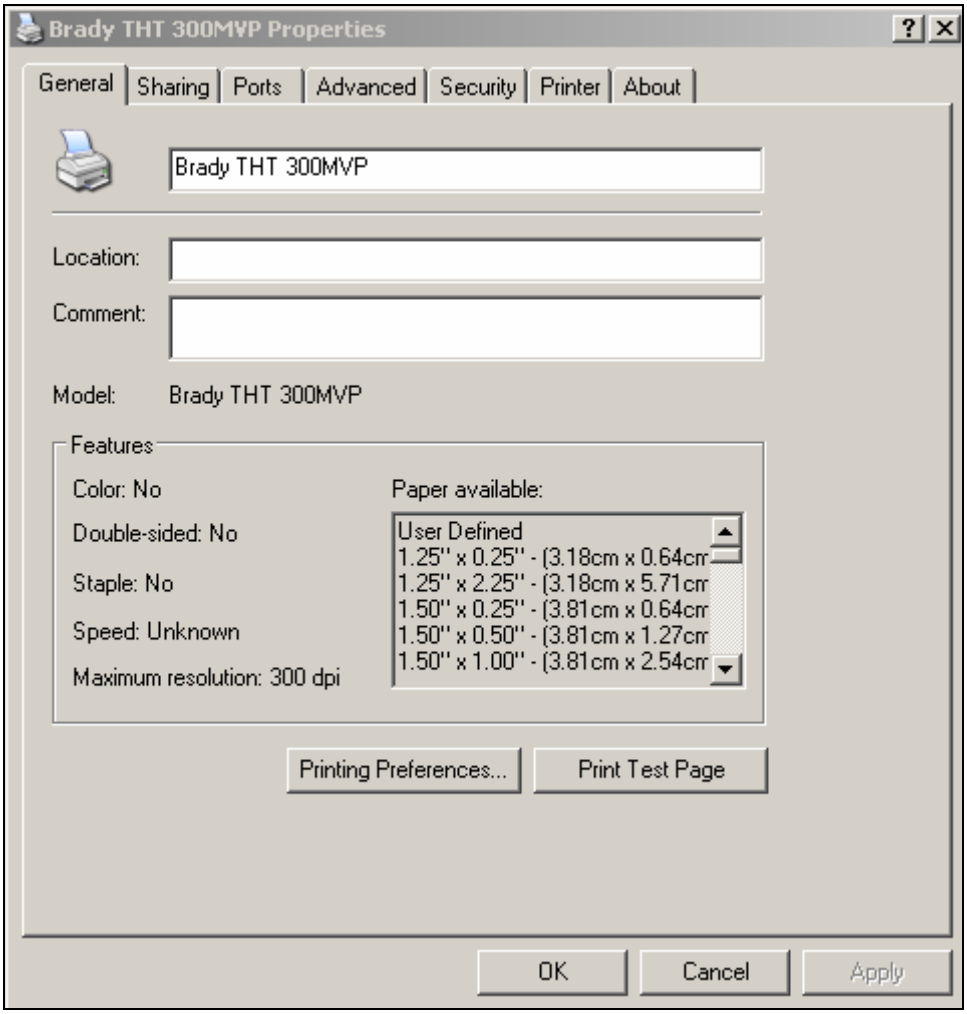

Figure 1. Brady THT 300MVP Properties Dialog Box

4. Click the **plus sign (+)** next to Paper/Output. Select **User Defined** from the **Paper Size** box and click **Customize**. The Paper Size Setup Dialog Box appears (See **Figure 3**.)

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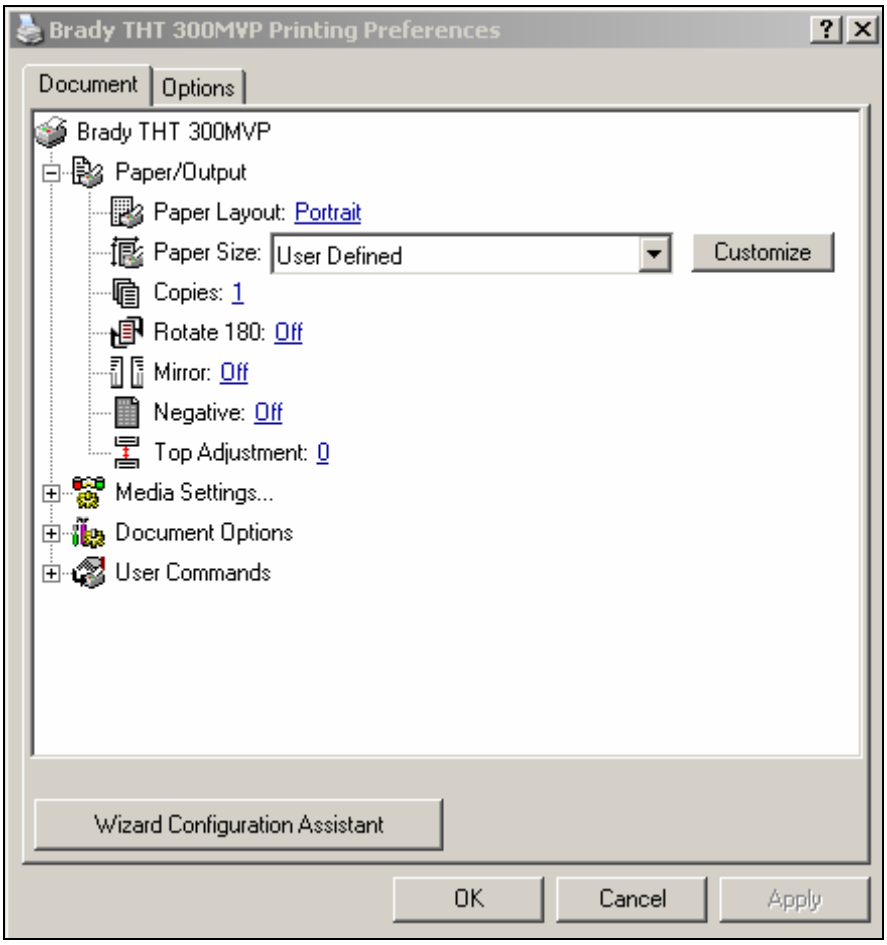

Figure 2. Printing Preferences Dialog Box

5. Select **Inches** from the **Unit of Measurement** box and select the **Width** and **Height** of your label stock.
6. Click **OK** on the Paper Size Setup dialog box.

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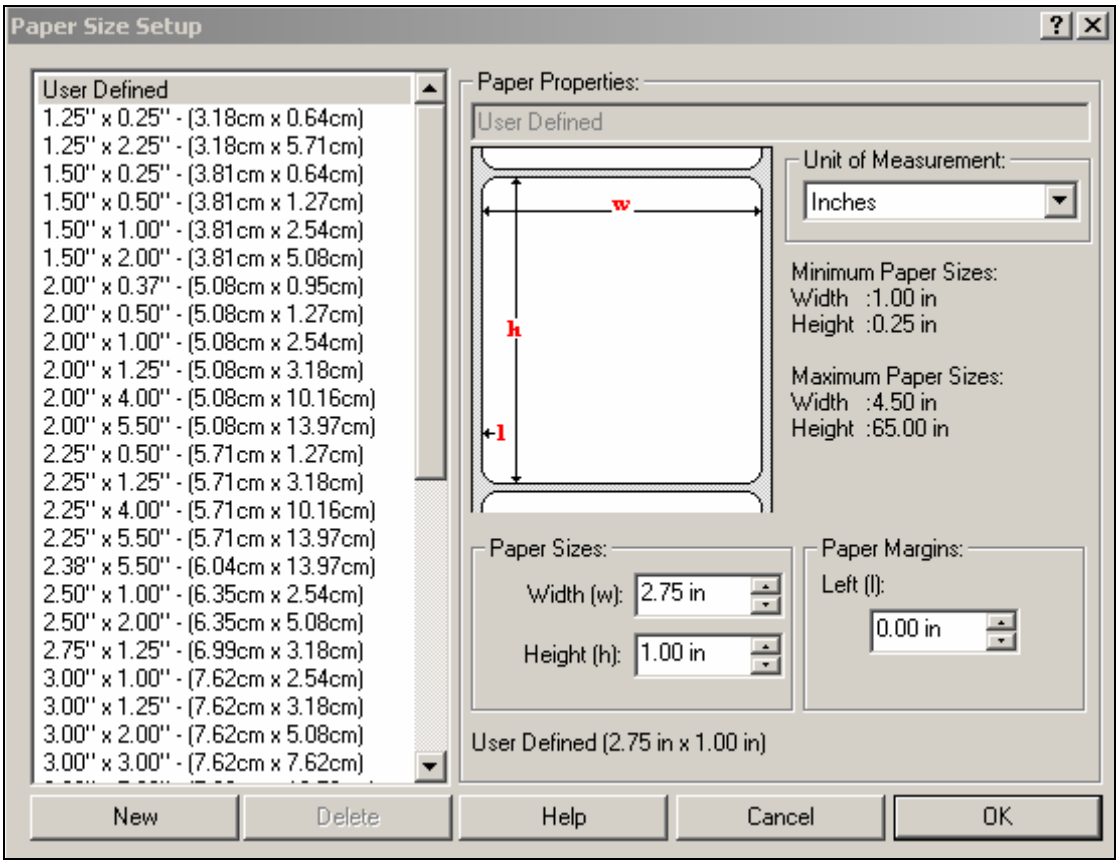
Paper Size Setup
User Defined
1.25" x 0.25" - (3.18cm x 0.64cm)
1.25" x 2.25" - (3.18cm x 5.71cm)
1.50" x 0.25" - (3.81cm x 0.64cm)
1.50" x 0.50" - (3.81cm x 1.27cm)
1.50" x 1.00" - (3.81cm x 2.54cm)
1.50" x 2.00" - (3.81cm x 5.08cm)
2.00" x 0.37" - (5.08cm x 0.95cm)
2.00" x 0.50" - (5.08cm x 1.27cm)
2.00" x 1.00" - (5.08cm x 2.54cm)
2.00" x 1.25" - (5.08cm x 3.18cm)
2.00" x 4.00" - (5.08cm x 10.16cm)
2.00" x 5.50" - (5.08cm x 13.97cm)
2.25" x 0.50" - (5.71cm x 1.27cm)
2.25" x 1.25" - (5.71cm x 3.18cm)
2.25" x 4.00" - (5.71cm x 10.16cm)
2.25" x 5.50" - (5.71cm x 13.97cm)
2.38" x 5.50" - (6.04cm x 13.97cm)
2.50" x 1.00" - (6.35cm x 2.54cm)
2.50" x 2.00" - (6.35cm x 5.08cm)
2.75" x 1.25" - (6.99cm x 3.18cm)
3.00" x 1.00" - (7.62cm x 2.54cm)
3.00" x 1.25" - (7.62cm x 3.18cm)
3.00" x 2.00" - (7.62cm x 5.08cm)
3.00" x 3.00" - (7.62cm x 7.62cm)
Paper Properties:
User Defined
w
h
l
Unit of Measurement:
Inches
Minimum Paper Sizes:
Width :1.00 in
Height :0.25 in
Maximum Paper Sizes:
Width :4.50 in
Height :65.00 in
Paper Sizes:
Width (w): 2.75 in
Height (h): 1.00 in
Paper Margins:
Left (l):
0.00 in
User Defined (2.75 in x 1.00 in)
New
Delete
Help
Cancel
OK

Figure 3. Paper Size Setup Dialog Box

7. Click **OK** on the message box.
8. Click the Printer tab on the Brady THT 300 MVP Properties dialog box. (See **Figure 4**.)

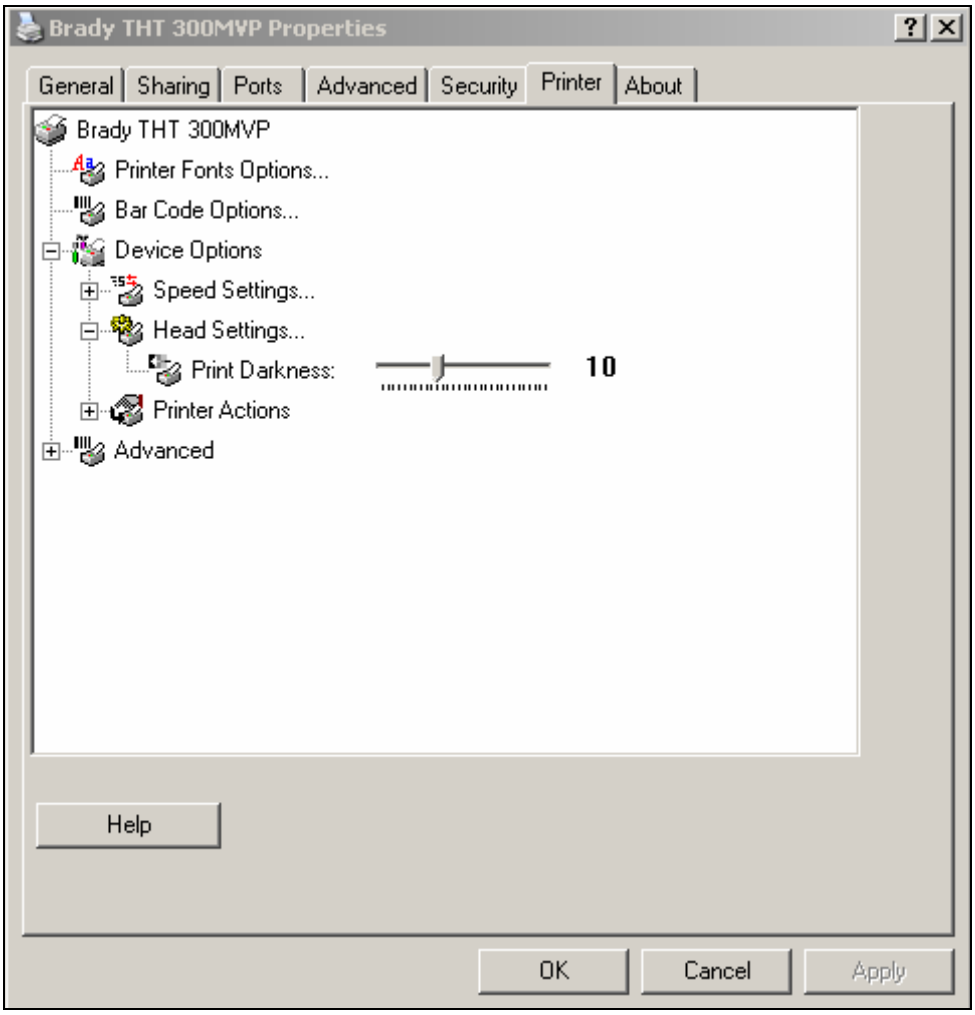

Figure 4. Printer Tab

9. Click the **plus sign (+)** next to the Device Options heading.
10. Click the **plus sign (+)** next to the Head Settings heading.
11. Click the Print Darkness heading.
12. Using the scrollbar, adjust the print darkness to **22**.
13. Click on the **plus sign (+)** next to Speed Settings.

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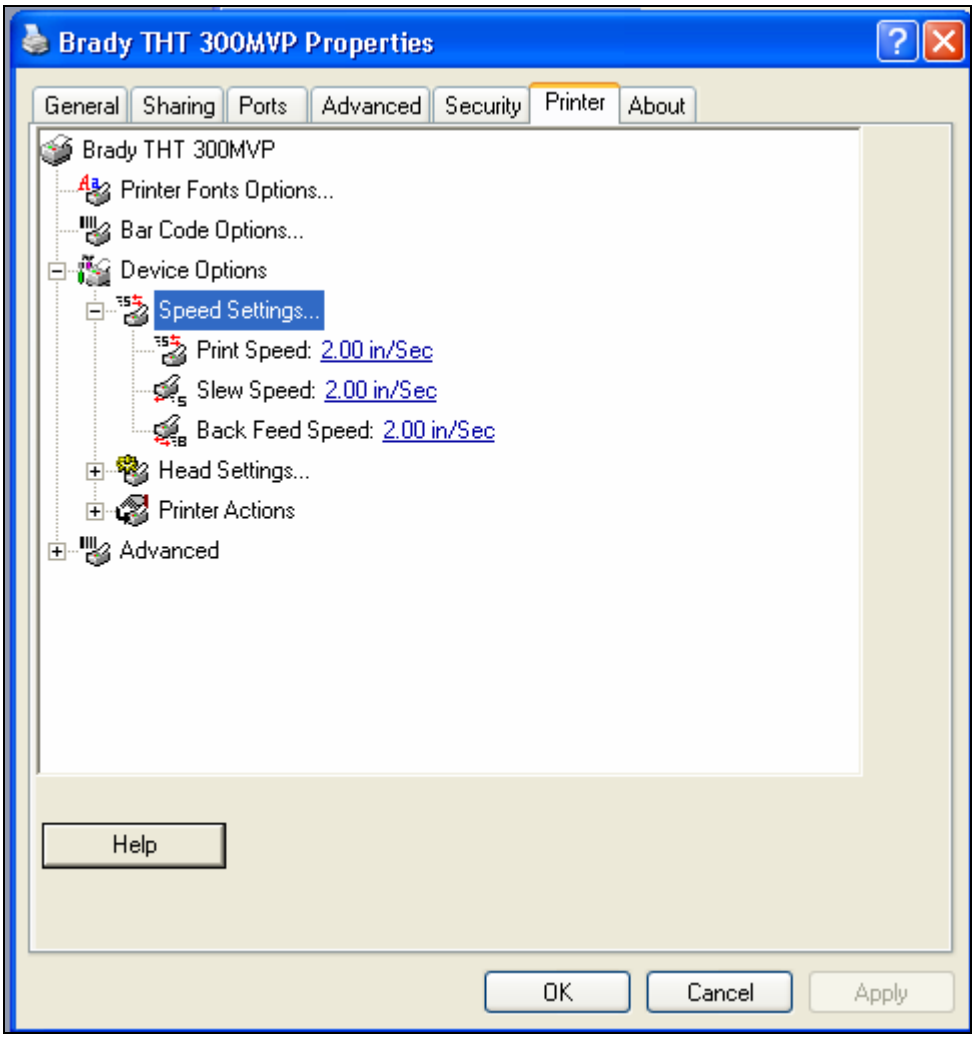

Figure 5. Speed Settings

14. Change the Print Speed, Slew Speed and Back Feed Speed to **2.00 in/Sec** and click **OK**.
15. Open the printer and remove the protective plate covering the Ribbon sensor. (See **Figure 6**.)

    Note: This step only needs to be performed the first time you set up the printer.

Figure 6. Removable Plate

16. Slide the Transmissive Sensor Protector to the outside of the Adjustable Transmissive Sensor. (See **Figure 7**.)

    Note: This step only needs to be performed the first time you set up the printer.

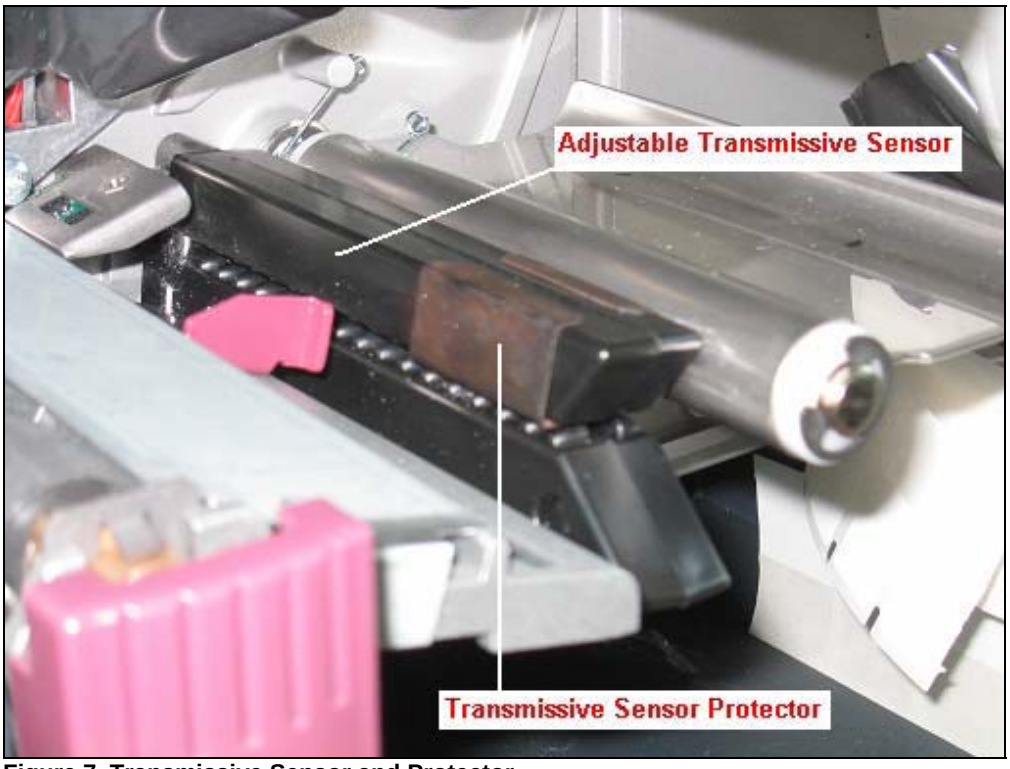

Figure 7. Transmissive Sensor and Protector

17. Open the printer and place the ribbon on the Ribbon Supply Spindle. Ensure that the shiny side of the ribbon is facing up. (See **Figure 8**.)

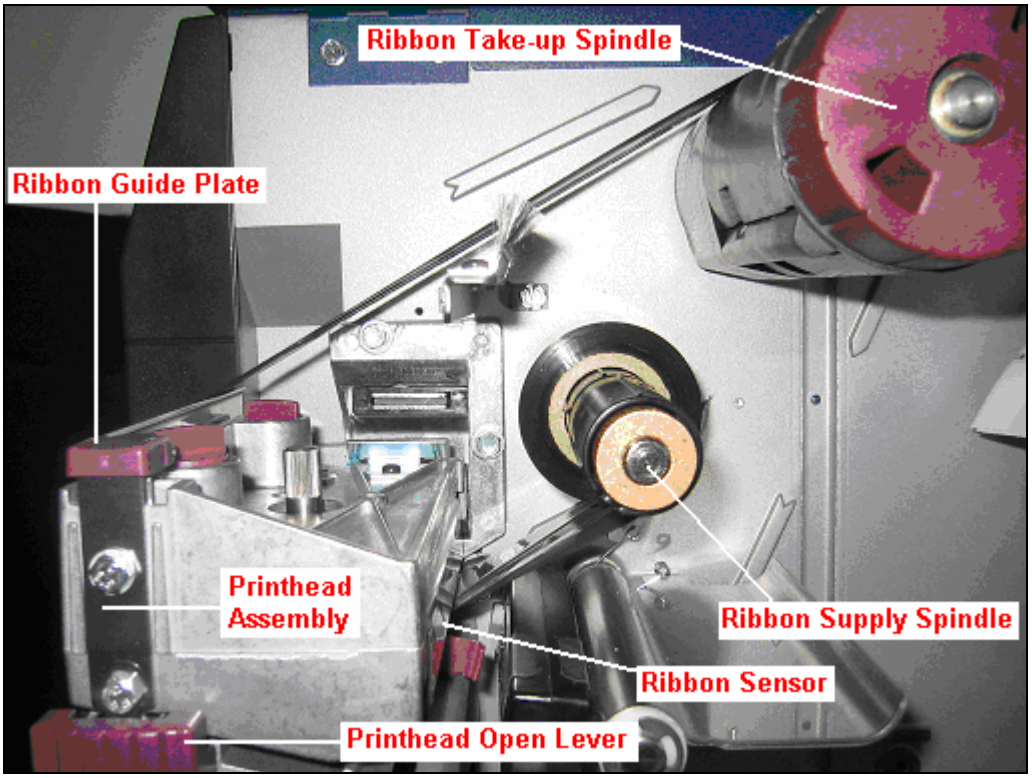

Figure 8. Ribbon Supply Spindle

18. Feed the ribbon through the Ribbon Sensor and around the print head assembly.
19. Wrap the ribbon around the Ribbon Take-up Spindle until it is tight.

    Note: Attaching a piece of tape on the end of the ribbon will help keep the ribbon tight during the loading process.

20. Place the labels on the Media Supply Spindle. The printable portions of the label must be face up. (See **Figure 9**.)

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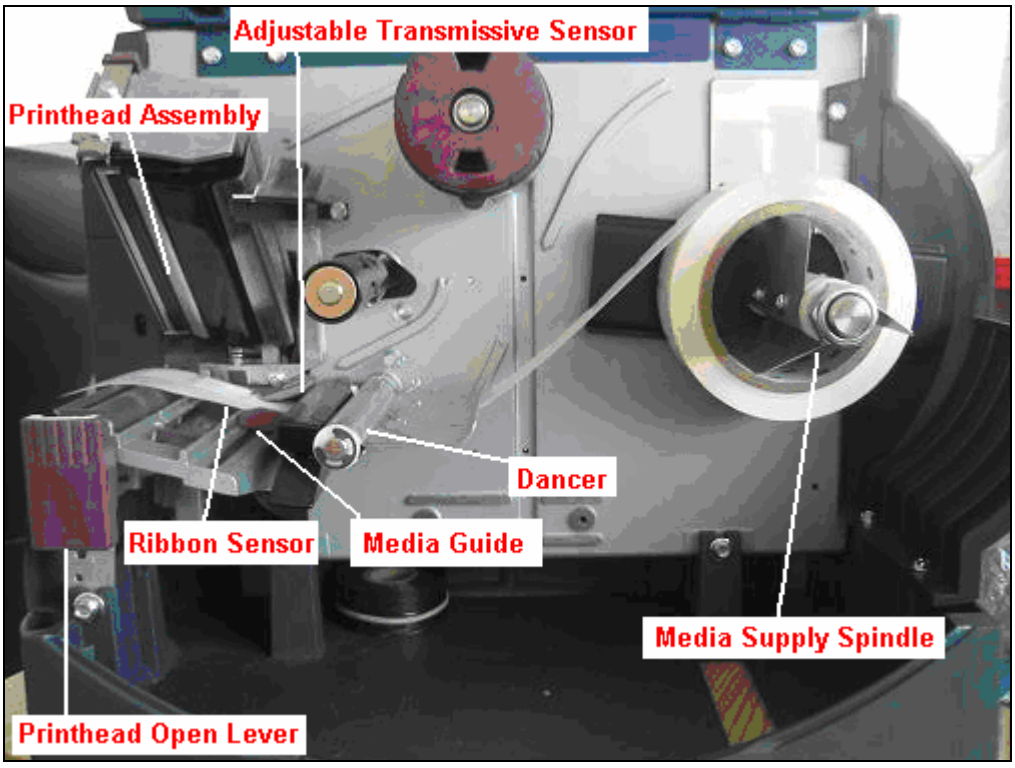

Figure 9. Loaded Media Supply Spindle

21. Place the labels through the Media Guide and align the notch between Labels with the Tear Off Plate.
22. Adjust the Ribbon Sensor (the red light under the label) so that the notch of the Label will cross the Ribbon Sensor. (See **Figure 10**.)

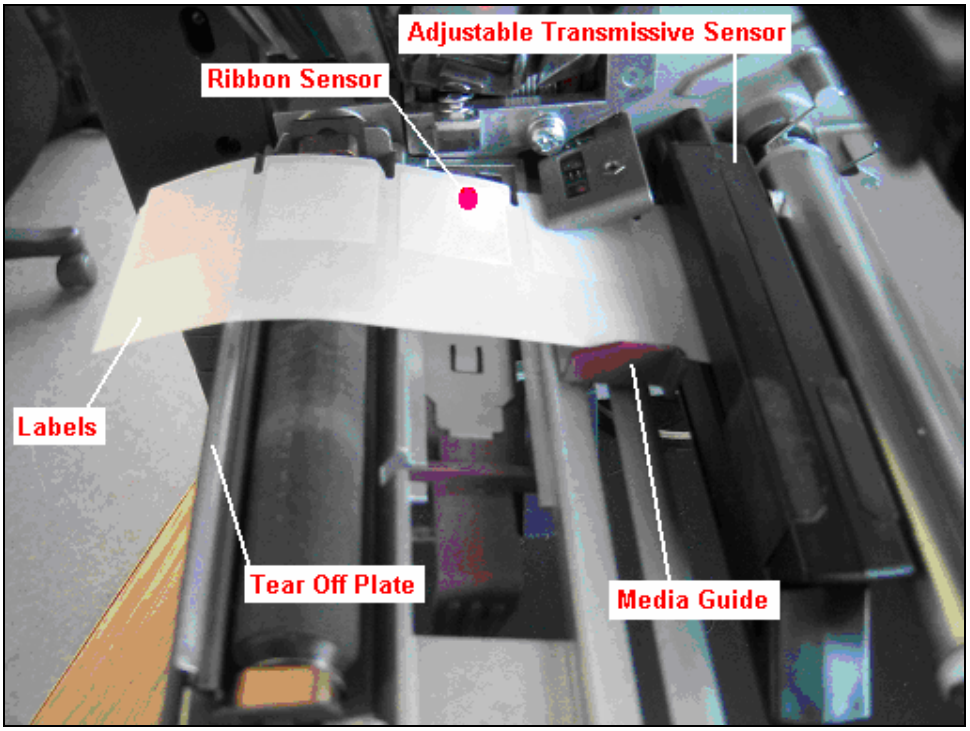

Figure 10. Adjusted Ribbon Sensor

23. Close the print head and ensure that the ribbon is aligned with the left side of the Label. This adjustment will likely require the user to slide the ribbon across the print head assembly.

Figure 11 shows what the ribbon and label stock should look like when exiting the printer. This view is from the front of the printer.

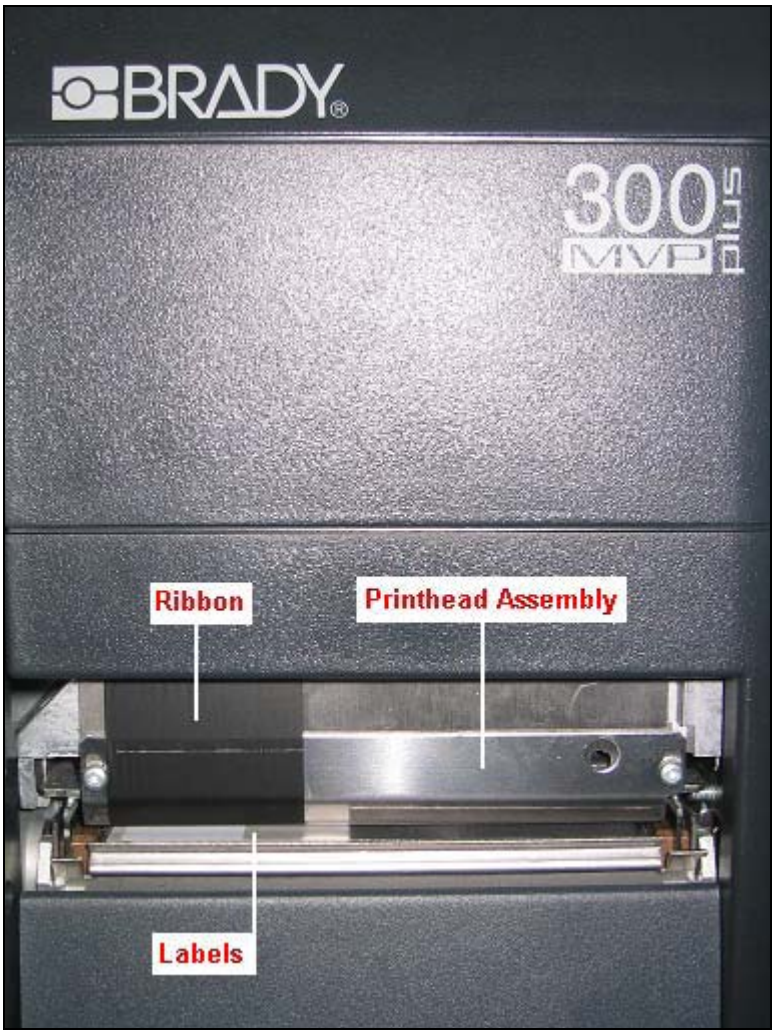

Figure 11. Front View of Printer

24. Close the printer.
25. Press the **Setup/Exit** button on the front of the printer. (See **Figure 12**.)

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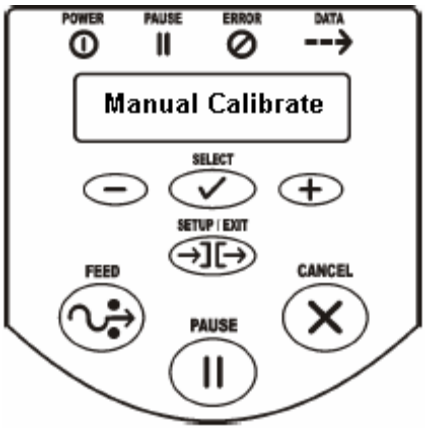

Figure 17. Front of Printer Options

26. Press the **Plus** (+) button until the printer displays **Manual Calibrate**.
27. Press the **Select** (SELECT ✓) button.
28. Press the **Plus** (+) button. This will cause the printer to re-calibrate its label settings. This will allow the printer to know exactly where to start and stop printing.
29. Press the **Setup\Exit** (SETUP | EXIT) button and press the **Plus** (+) button to save the changes.
30. Log into the LDMS and select **Printer Configuration** from the **Administration** menu.
31. Select **Brady THT MVP300** as your label printer. You are now ready to print labels from the LDMS using the Brady MVP300 label printer.

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